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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/695,127      | 10/28/2003  | Mark Thomas Endicott |                     | 6108             |

7590 11/14/2005

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| EXAMINER |
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BAREFORD, KATHERINE A

| ART UNIT | PAPER NUMBER |
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1762

DATE MAILED: 11/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/695,127

Applicant(s)

ENDICOTT ET AL.

Examiner

Katherine A. Bareford

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 19 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

*Claims 1-14 are canceled*

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

The amendment to the specification of Sept. 19, 2005 has been received and entered. The amendment to the claims and arguments of May 12, 2005 have been received and entered. It is noted that claims 1-14 are canceled, and new claims 15-23 are provided.

#### *Specification*

1. The amendment filed September 19, 2005 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: in paragraph (006) the deletion that the coating material can be a "cerment, carbide, ceramic or other like material" and the addition at the end of the paragraph starting "It is important to note that the coating material is a hard metal alloy and not a composite or cemented carbide material. " and ending with the end of the paragraph.

The deleted material clearly indicated that as originally filed the coating material could be other than a metal or alloy. Furthermore, the added material at the end of the paragraph contradicted the originally filed indication that cerment, carbide, ceramic or other like material could be used, by restricting the materials that can be used in a way not originally indicated in the disclosure when filed.

Applicant is required to cancel the new matter in the reply to this Office Action.

*Claim Rejections - 35 USC § 112*

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 15-23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In **claim 15, lines 5-6, and claim 20, lines 7-8** “such that the surface finish of the coated bead seat has a minimum mean surface finish of 450 microinches” is not supported by the disclosure as originally filed. There was no indication as to what minimum surface finish was required. Therefore, this addition is new matter.

In **claim 17, lines 1-3, and claim 21, lines 1-3** the claim that the “refractory metal or alloy is selected from the group consisting of iron, cobalt, nickel, chromium, carbon, vanadium, molybdenum, tungsten and niobium” is not supported by the disclosure as originally filed, as all of these materials were not provided. Therefore, this addition is new matter.

In claim 18, lines 1-2, and claim 22, lines 1-2 the claim that “the refractory metal or alloy consists of an iron-chromium-carbon alloy” is not supported by the disclosure as originally filed, as all of these materials were not provided as an alloy. Therefore, this addition is new matter.

The other dependent claims do not cure the defects of the claims from which they depend.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 15-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 15, line 5-6, and claim 20, lines 7-8, “the surface finish of the coated bead seat has a minimum mean surface finish of 450 microinches” is confusing as to what kind of finish is required. The phrase would more clearly read, “the surface roughness of the coated bead seat has a minimum mean surface finish of 450 microniches”

Claim 17, lines 1-3, and claim 21, lines 1-3, that the “refractory metal or alloy is selected from the group consisting of iron, cobalt, nickel, chromium, carbon, vanadium, molybdenum, tungsten and niobium” is contradictory and confusing as to what is

required. Refractory metals do not include iron, cobalt or nickel, for example, and carbon is not a metal. Please note the provided definition of "refractory metal".

**Claim 18, lines 1-2, and claim 22, lines 1-2, "the refractory metal or alloy consists of an iron-chromium-carbon alloy"** is contradictory and confusing as to what is required. Refractory metals do not include iron, and carbon is not a metal. Please note the provided definition of "refractory metal".

The other dependent claims do not cure the defects of the claims from which they depend.

#### *Double Patenting*

6. Applicant is advised that should claim 18 be found allowable, claim 22 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Please note that both claims depend from claim 15. Did applicant intend for claim 22 to depend from claim 20?

#### *Claim Rejections - 35 USC § 103*

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 15-17, 19-21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wei et al (US 5569496) in view of Kaufold et al (US 2004/0142109) and Thermal Spraying: Practice, Theory, and Application, page 42 (hereinafter TS).

It is noted that the effective date of Kaufold extends back to Sept. 25, 2002, as all of the material relied upon of Kaufold in the rejection below also is provided in provisional application 60/413,359 from which Kaufold claims priority.

Claims 15 and 20: Wei teaches a method of reducing the slip of a tire on a vehicle wheel. Column 4, lines 60-68. A metallic wheel is provided. Column 2, lines 45-65. The

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wheel has a bead seat. Column 2, lines 55-65 and figure 3. The surface of the bead seat is coated with a material. Column 4, lines 30-68. The material can be a metal that is the same or different from the metal of the wheel rim. Column 4, lines 50-60. The material is rough. Column 4, lines 60-68 (the material is rougher than the wheel surface). The friction between the tire and the wheel is increased, thus reducing slip. Column 4, lines 60-68. The coating can be applied by plasma spraying 4, lines 30-68.

Claim 16: the wheel can be a vehicle wheel. Column 1, lines 5-10.

Claims 17, 21: the coating can be metal. Column 4, lines 50-60.

Claims 19, 23: the coating can be by plasma spraying. Column 4, lines 53-55.

Wei teaches all the features of these claims except that (1) the wheel is a truck wheel, etc. (claims 16, 20), (2) that the surface is abrasively blasted prior to coating (claim 20), (3) the coating material (claims 17, 21) and <sup>4</sup>(~~8~~) the surface roughness of 450 microinches or more.

However, Kaufold teaches a method of coating a vehicle wheel. Paragraph [0009]. A metallic wheel is provided. Paragraph [0010]. The wheel has a bead seat. Figure 2 and paragraph [0010]. The surface of the bead seat is coated with a material, such as a metal. Paragraphs [0028] - [0031]. The coating can be applied by thermal spraying, such as by plasma spraying. Paragraph [0035]. The vehicle wheel can be a truck wheel. Paragraph [0003]. Prior to thermal spraying the bead seat, the surface can be abrasively blasted (thus roughening the surface) to prepare the surface for thermal



spraying. Paragraphs [0009] and [0036]. The coating material can include materials such as tungsten carbide and chrome (chromium). Paragraph [0051].

TS teaches that when performing thermal spraying, rough surfaces result. Page 42. Standard plasma spray coatings have a roughness of 100 to 500 microinches, for example, and other thermal spraying processes can produce roughness that are even greater. Page 42.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Wei to use a truck wheel as the vehicle wheel as suggested by Kaufold with the expectation of providing a desirable truck wheel, because Wei teaches a treatment for a vehicle wheel to desirably hold the tire in contact with the wheel rim and Kaufold teaches that a wheel with a wheel rim holding a tire can desirably be a truck wheel. Furthermore, it would have been obvious to modify Wei to abrasively blast the surface of the wheel prior to applying the coating as suggested by Kaufold in order to provide a desirably coated surface, because Wei teaches a method of thermal spraying a coating to tire bead seats in wheels and Kaufold teaches that when thermal spraying a coating to tire bead seats in wheels, it can be desirable to abrasively blast the surface prior to spraying to prepare the surface for spraying. It would further have been obvious to modify Wei to use the coating materials, including the refractory material chromium, as suggested by Kaufold in order to provide a desirably coated surface, because Wei teaches a method of thermal spraying a coating to tire bead seats in wheels and that a variety of metals can be used

and Kaufold teaches that when thermal spraying a coating to tire bead seats in wheels, it can be desirable to use the metal chromium. It would further have been obvious to modify Wei in view of Kaufold to provide the coated surface with a roughness of 500 microinches, as suggested by TS in order to provide a desirably coated surface, because Wei in view of Kaufold teaches a method of thermal spraying a coating to tire bead seats in wheels by plasma spraying and that a rough surface is desired as taught by Wei and TS teaches that when plasma spraying a coating the roughness of the coating can be 500 microinches, for example.

#### *Response to Arguments*

10. Applicant's arguments with respect to claims 15-23 have been considered but are moot in view of the new ground(s) of rejection.

Please note the addition of TS as discussed above as to the new requirement as to the surface finish.

#### *Conclusion*

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

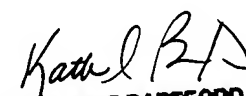
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katherine A. Bareford whose telephone number is (571) 272-1413. The examiner can normally be reached on M-F(6:00-3:30) with the First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications and for After Final communications.

Other inquiries can be directed to the Tech Center 1700 telephone number at (571) 272-1700.

Furthermore, information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
KATHERINE BAREFORD  
PRIMARY EXAMINER